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ABSTRACT

Addressed to the members of the general assembly of the Commonwealth of Virginia, this report summarizes the surveys for asbestos of all state-owned buildings and all public schools as required by state code. The survey of state-owned buildings was carried out by a consulting firm. Over 5,900 buildings were surveyed, representing approximately 65 million square feet of space. Excerpts of the report contain the executive summary; composite cost estimates for removal of friable asbestos-containing materials; and a priority ranking into one of four levels for all areas based on the exposure potential value. The survey of public schools was carried out following the requirements of the Federal Asbestos Hazard Emergency Response Act (AHERA). The report identifies all friable and nonfriable asbestos-containing building materials, rates their potential risk to human health, and includes estimated costs of asbestos removal. A total of 1,024 schools, which includes 3,283 buildings, were included in the survey. (MLF)

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**REPORT OF THE DEPARTMENT
OF GENERAL SERVICES**

**Surveys for Asbestos
of All State-Owned
Buildings and All
Public Schools**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



Senate Document No. 27

**COMMONWEALTH OF VIRGINIA
RICHMOND
1989**

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EA 081 973



COMMONWEALTH of VIRGINIA

DEPARTMENT OF GENERAL SERVICES

WENDELL L. SELDON
DIRECTOR

December 30, 1988

209 9th STREET OFFICE BUILDING
RICHMOND, VIRGINIA 23219
(804) 786-3311

TO: Members of the General Assembly

I am pleased to provide you with a summary of the surveys for asbestos of all State-owned buildings and all public schools as required by Section 2.1-526.17 of the Code of Virginia.

Included in the surveys is a categorization of the risk to human health posed by the materials discovered during the surveys and the estimated cost to abate the hazard in each building. The estimates include the cost of removing the asbestos-containing materials and reinsulation if necessary. Design and consulting fees are not included.

The survey of State-owned buildings was carried out by a consulting firm using standards developed by the Department of General Services. Over 5,900 State-owned buildings were surveyed which included approximately 65 million square feet of space. Due to the volume of the report, it would be impractical to include the entire report. We are, therefore, including excerpts of Sections II and VIII of the Executive Summary and composite cost estimates for removal of friable asbestos-containing materials. The survey results and cost estimates are currently under review by the Department of General Services.

The Survey of Public Schools was carried out following the requirements of the Federal Asbestos Hazard Emergency Response Act (AHERA). The report identifies all friable and nonfriable asbestos-containing building materials and rates their potential risk to human health. A total of 1024 schools, which includes 3283 buildings, were included in the survey. A copy of the report from the Department of Education with estimated costs of asbestos removal is included in pages 7 through 11.

The Department of General Services and the Department of Education will be glad to provide additional information.

Respectfully,

Wendell L. Seldon

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**COMMONWEALTH OF VIRGINIA
STATEWIDE EXECUTIVE SUMMARY**

I. EXECUTIVE SUMMARY

Hall-Kimbrell Environmental Services was retained by the Commonwealth of Virginia, Department of General Services, to conduct a general assessment of specified state owned buildings used and operated by 108 agencies around the state. The purpose of these inspections was to identify, quantify, sample, and differentiate into priority levels, all accessible, friable and potentially friable materials suspected of containing asbestos.

Between September 28, 1987 and August 26, 1988, representatives of Hall-Kimbrell Environmental Services inspected 5,915 buildings under the authorization of 108 state agencies around the Commonwealth of Virginia, concentrating on accessible, friable and potentially friable materials suspected of containing asbestos. The total gross square footage of all buildings surveyed is 64,894,286 square feet.

Reports were provided to the Department of General Services which contained all initial inspection data as well as laboratory analysis of all bulk samples taken during inspections and budgetary cost estimates for the removal and replacement of all materials determined to contain asbestos. A comprehensive report was provided for each state agency.

As part of the reporting process, Hall-Kimbrell made specific recommendations as to the course of action each agency should take to begin minimizing and eventually eliminate the hazards presented by asbestos containing materials. One of the most useful tools now available to the state agencies in their efforts to control their asbestos is the value assigned to each area representing its Priority Level classification.

During building inspections each area determined by site analysis to contain materials suspected of containing asbestos was assigned numeric values representing friability, present condition of the material, exposure and accessibility of the material, and the proximity of the material to an air plenum. These values, as well as the average asbestos content of all asbestos containing materials in each area, were then formulated to produce a numeric value representing each area's potential for exposure.

Based on the exposure potential value, Hall-Kimbrell has prioritized all areas into one of four levels. These priority levels are used to express numerically the potential for exposure of asbestos-containing materials within their environment and to assist in the understanding of a specific area's need for corrective action relative to other areas in the building. The priority level can also be used as a tool in implementing a phased abatement program. Priority Level 1 areas are those which

present the highest potential for fiber release and should be considered first during initial abatement project planning. Priority Level 2 areas represent an increased exposure potential, however not as severe as Priority Level 1. Priority Level 3 and 4 areas have decreasingly lower exposure potentials. A more comprehensive discussion of priority level determination can be found in section V. of this report.

All assigned priority levels are subject to change as a result of any alterations or modifications of the area which could affect the condition of the asbestos-containing materials, such as renovation or destruction.

Hall-Kimbrell recommends the removal of all Priority Level 1 materials present during phase 1 of a phased abatement program. Priority Level 2 materials should be carefully analyzed to determine what, if any, repairs need to be made immediately. These and all other materials should be repaired as necessary and monitored under a stringently implemented operations and maintenance plan until they can be removed during future phases of abatement.

As a vital segment of the general assessment report, Hall-Kimbrell has provided budgetary estimates for the removal of all asbestos-containing materials and their replacement with similar asbestos free products. These estimates were provided for each individual material, each area in which the materials exist, each building and finally total cost for the removal and reinsulation of all asbestos-containing materials found throughout the agency. The following is the estimated construction costs for the removal and reinsulation of all materials found to contain asbestos throughout all buildings included in the survey.

Priority Level 1 -	\$15,559,468
Priority Level 2 -	\$19,140,813
Priority Level 3 -	\$61,482,592
Priority Level 4 -	\$ 9,811,970

Total -	\$105,994,843
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These estimates are for removal and reinsulation only, and do not include architectural/engineering fees, air monitoring, contingency, or reimbursable expenses. For specific material, area, and building estimates, as well as specific material estimates throughout the facility, please refer to the spreadsheet section of this report. The Hall-Kimbrell fee scale for architectural/engineering and management is attached to provide an understanding of the approximate cost of these services. This chart is used in estimating the cost of Hall-Kimbrell projects and will vary among other firms.

The costs associated with air monitoring and construction management during the course of an abatement project can be calculated at approximately 11% of the total construction costs. Again, this is the scale Hall-Kimbrell uses to estimate removal project

costs in assessment reports. Hall-Kimbrell's air monitoring fees are negotiable, depending on the size of the project, and may differ from other firms.

VIII. SYNOPSIS OF ANTICIPATED ABATEMENT COST

The spreadsheets included in each report contain a breakdown of the budgetary cost estimated for each material, a total for each area, a subtotal for each building, and finally, a grand total for removal of all asbestos-containing materials and replacement with non-asbestos-containing materials of equivalent or better quality.

The estimated abatement cost is budgetary in nature, since there are many variables which will affect the final construction estimate. Once it has been decided which materials to address, either totally or in a phased program, a final estimated construction cost can be determined based on variables such as time frame for construction, type of replacement material chosen, occupancy during abatement, and size of project chosen. All budgetary estimates are based on the removal option and replacement with non-asbestos-containing material. This option has been chosen because it usually represents a maximum expenditure, in the short run, that the owner would be making, as opposed to other temporary forms of abatement such as encapsulation or enclosure. Encapsulation is a temporary measure which will seal and, therefore, retard fiber release for only a limited period of time. However, the materials remain in the building and must be monitored periodically under an operations and maintenance program. If, however, the study identifies select areas for which we would recommend encapsulation, enclosure, rewapping or other forms of temporary abatement, specific comments and recommendations will be included. There are no standard cost-estimating guidelines that can be used in this report to establish those estimates, since there are numerous variables that affect the final cost.

When attempting to provide a synopsis of the various options available in making an abatement decision, only general options or alternatives can be addressed, since there are many combinations of areas and materials which could be used in any one abatement project. Historically, most building owners have chosen one of two types of projects:

1. Removal and Replacement of All Asbestos-Containing Materials: This option is the most costly in the short run and may be the most difficult to pursue, considering the possible magnitude of the project, the associated funds which must be appropriated, and the difficulty of moving building occupants to allow for abatement of all materials in one project. However, this

option will eliminate the asbestos exposure potential and any problems associated with the presence of asbestos-containing materials (ACM).

2. A Phased Abatement Program by Priority: In most cases, the most prudent decision is to remove the asbestos-containing materials on a phased basis, beginning with all the Priority Level 1 materials or a combination of the Priority Level 1 and Priority 2 materials. This option would allow the Commonwealth of Virginia or the individual agency to expend the initial funds on those areas which present the most severe exposure potential.

Exposure from any asbestos-containing material which remains should be minimized under an operations and maintenance plan until such time as those materials are removed. In many cases, building owners will actually gear a phased abatement program to the priority level, so that Priority Level 1 materials are slated for removal the first year, Priority Level 2 materials will be addressed in the second year or second phase, Priority Level 3 materials in the third year or third phase, and so on.

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HEALTH OF VIRGINIA PRIORITIZED GIST OBTAINED FOR GENERAL / ESTIMATION

USING AGENCY NAME AND NUMBER	PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4	TOTAL GIST
123 DEPARTMENT OF MILITARY AFFAIRS	870,253	84,887	9920,411	81,968	9997,319
127 OFFICE OF EMERGENCY SERVICES	80	80	835,392	80	835,392
146 SCIENCE MUSEUM OF VIRGINIA	80	80	826,690	80	826,690
154 DIVISION OF MOTOR VEHICLES	8129,600	8907	832,817	80	8162,924
156 DEPARTMENT OF STATE POLICE	8360	823,126	8319,235	826,128	8369,849
162 VIRGINIA EMPLOYMENT COMMISSION	80	80	80	80	80
194 DEPARTMENT OF GENERAL SERVICES	813,329	8719,389	83,826,840	8168,580	84,728,138
203 WOODROW WILSON REHABILITATION CENTER	843,090	820,880	8146,290	813,844	8223,304
204 COLLEGE OF WILLIAM AND MARY	82,604,963	82,552,155	81,629,689	875,287	86,861,874
206 VIRGINIA COMMONWEALTH UNIVERSITY	8459,152	81,139,369	8983,684	8331,258	82,833,463
207 UNIVERSITY OF VIRGINIA	82,365,436	81,125,469	86,872,676	81,868,360	816,631,679
208 VIRGINIA POLYTECHNIC INSTITUTE	891,007	8699,956	818,897,887	83,134,829	820,823,679
209 UVA MEDICAL CENTER - BLUE RIDGE HOSPITAL	845,943	8127,862	8363,822	8174,390	8711,217
210 TRUCK AND ORNAMENTALS RESEARCH STATION	843,865	80	878,886	84,656	8136,567
211 VIRGINIA MILITARY INSTITUTE	8243,631	8542,367	81,356,366	8179,638	82,313,882
212 VIRGINIA STATE UNIVERSITY	8304,167	81,538,676	82,888,684	8179,565	84,828,870
213 NORFOLK STATE UNIVERSITY	8166,916	8490,634	8311,888	872,496	81,821,929
214 LONGWOOD COLLEGE	8193,806	8591,399	8525,784	887,662	81,997,831
215 MARY WASHINGTON COLLEGE	890,845	8704,156	81,235,720	867,327	82,898,348
216 JAMES MADISON UNIVERSITY	8171,755	8123,565	81,890,718	8125,774	82,311,812
217 RADFORD UNIVERSITY	84,176,805	8779,784	81,127,172	8323,200	86,486,961
218 VIRGINIA SCHOOL FOR THE DEAF AND BLIND	80	88	8878,381	850,764	8929,123
219 VIRGINIA SCHOOL AT HAMPTON	8193,881	8451,186	8360,436	8137,490	81,142,993
221 OLD DOMINION UNIVERSITY	8635,297	81,502,181	8481,334	8489,074	83,827,886
236 VIRGINIA COMMONWEALTH UNIVERSITY	8327,349	829,850	81,758,305	820,847	82,135,351
241 RICHARD BLAND COLLEGE	80	80	822,315	848,376	870,891
242 CHRISTOPHER NEWPORT COLLEGE	80	85,867	8416,812	851,977	8473,856
246 CLINCH VALLEY COLLEGE	80	80	81,913,752	8253,115	82,168,867
247 GEORGE WASON UNIVERSITY	8868,863	8115,373	8644,982	85,832	81,634,170
263 REHABILITATION CENTER FOR THE BLIND	80	80	812,324	80	812,324
265 WILLIAM & MARY - ASSOCIATED RESEARCH CAMPUS	80	80	80	80	80
268 INSTITUTE OF MARINE SCIENCE	84,580	85,510	815,585	8175	825,850
275 NEW RIVER COMMUNITY COLLEGE	80	80	87,576	844,456	852,832
276 SOUTHSIDE VIRGINIA COMMUNITY COLLEGE	80	8422,400	84,644	80	8427,844
277 PAUL D. CAMP COMMUNITY COLLEGE	80	80	80	80	80
278 RAPPAHANNOCK COMMUNITY COLLEGE	80	80	810,160	80	810,160
279 DANVILLE COMMUNITY COLLEGE	80	80	829,596	86,448	836,044
280 NORTHERN VIRGINIA COMMUNITY COLLEGE	8110,665	8532,900	8722,627	822,832	81,388,224
282 PIEDMONT VIRGINIA COMMUNITY COLLEGE	80	80	80	80	80
283 J. SARGENT REYNOLDS COMMUNITY COLLEGE	80	80	817,396	80	817,396
284 EASTERN SHORE COMMUNITY COLLEGE - NELPA	80	80	86,493	80	86,493
285 PATRICK HENRY COMMUNITY COLLEGE	80	80	88,160	8576	88,736
286 VIRGINIA WESTERN COMMUNITY COLLEGE	834,170	81,280	892,125	825,134	8152,709
287 DARNEY S. LANCASTER COMMUNITY COLLEGE	80	80	87,728	892,400	8100,128
288 WYTHEVILLE COMMUNITY COLLEGE	80	80	843,271	818,627	861,898
290 JOHN TYLER COMMUNITY COLLEGE	80	821	83,456	88,208	811,685
291 BLUE RIDGE COMMUNITY COLLEGE	80	80	821,443	8288	821,733
292 CENTRAL VIRGINIA COMMUNITY COLLEGE	80	80	84,704	83,600	88,304
293 THOMAS NELSON COMMUNITY COLLEGE	80	80	820,444	80	820,444
294 SOUTHWEST VIRGINIA COMMUNITY COLLEGE	80	80	818,755	87,276	826,031
295 TIDEWATER COMMUNITY COLLEGE	839,624	844,160	837,936	80	8121,720
296 VIRGINIA HIGHLANDS COMMUNITY COLLEGE	80	80	817,724	816,418	834,142
297 GERMANNA COMMUNITY COLLEGE	80	80	81,920	82,688	84,608
298 LORD FAIRFAX COMMUNITY COLLEGE	80	80	80	80	80
299 MOUNTAIN EMPIRE COMMUNITY COLLEGE	80	80	83,010	80	83,010
301 AGRICULTURE AND CONSUMER SERVICES	80	80	846,286	80	846,286
402 MARINE RESOURCES COMMISSION	817,550	80	89,881	80	827,431
403 COMMISSION OF GAME AND INLAND FISHERIES	816,250	810,672	890,398	82,160	8119,480
404 DIVISION OF FORESTRY	811,360	821,928	846,945	84,928	885,161
407 PORT AUTHORITY	8214,646	859,085	8103,036	80	8376,767
409 DEPARTMENT OF MINES, MINERALS, AND ENERGY	80	80	80	80	80
417 BLUNSTON HALL	80	84,160	80	80	84,160

GOVERNMENTS OF VIRGINIA PRIORITY ONE COST ESTIMATES FOR GENERAL / CAPITALIZATION

USING AGENCY NAME AND NUMBER	PRIORITY 1	PRIORITY 2	PRIORITY 3	PRIORITY 4	TOTAL COST
418 DIVISION OF PARKS AND RECREATION	\$34,880	80	\$19,818	80	\$54,698
435 JAMESTOWN FOUNDATION	80	\$960	80	\$2,160	\$3,120
501 DEPARTMENT OF HIGHWAYS AND TRANSPORTATION	\$28,951	\$175,812	\$1,077,973	\$323,388	\$1,605,124
501 DEPARTMENT OF HEALTH	80	80	\$33,363	\$1,680	\$33,743
702 COMMISSION FOR THE VISUALLY HANDICAPPED	80	\$33,430	\$3,360	\$5,760	\$44,550
703 CENTRAL STATE HOSPITAL	\$825,252	\$1,756,075	\$607,178	\$72,804	\$3,261,309
704 EASTERN STATE HOSPITAL	\$262,405	\$802,890	\$802,742	\$23,229	\$1,891,266
705 SOUTHEASTERN STATE HOSPITAL	\$85,531	\$584,360	\$771,970	\$3,292	\$1,445,153
706 WESTERN STATE HOSPITAL	\$20,511	\$40,888	\$3,256,736	\$1,143,471	\$4,461,606
707 CENTRAL VIRGINIA TRAINING CENTER	\$161,023	\$230,394	\$1,167,519	\$380,866	\$1,939,802
708 BEAUREGarde CENTER FOR HUMAN DEVELOPMENT	\$24,408	\$8,367	\$183,722	\$6,560	\$222,957
709 POWHATAN / JAMES RIVER CORRECTIONAL CENTER	80	\$90,282	\$608,366	\$160,792	\$759,440
710 STATE PENITENTIARY	\$182,638	80	\$55,733	\$24,000	\$262,371
711 BUREAU OF INDUSTRIAL ENTERPRISES	80	80	\$29,500	80	\$29,500
712 SON AIR LEARNING CENTER	\$3,840	\$38,854	\$99,440	\$3,120	\$145,254
713 BEAUREGarde LEARNING CENTER	80	\$118,672	\$244,400	80	\$363,072
714 BARNETT LEARNING CENTER	80	80	\$160	\$191,649	\$191,809
715 HANOVER LEARNING CENTER	\$38,694	\$89,995	\$168,512	80	\$296,801
716 CORRECTIONAL CENTER FOR WOMEN	80	\$12,432	\$718,831	\$50,197	\$781,460
717 SOUTHAMPTON CORRECTIONAL CENTER	\$30,411	\$253,915	\$87,911	80	\$372,237
718 BLAND CORRECTIONAL CENTER	80	\$13,795	\$1,628,364	80	\$1,642,159
723 SOUTHEASTERN VIRGINIA TRAINING CENTER	80	80	\$2,838	\$1,392	\$4,230
724 CATANHA MENTAL HOSPITAL	\$32,880	80	\$452,745	\$8,401	\$494,026
725 NORTHERN VIRGINIA TRAINING CENTER	80	80	\$122,980	80	\$122,980
726 SOUTHSIDE VIRGINIA TRAINING CENTER	\$52,039	\$84,860	\$11,960	\$2,640	\$151,499
727 VIRGINIA TREATMENT CENTER FOR CHILDREN	\$10	83	\$23,260	\$110	\$23,383
728 VIRGINIA MENTAL HEALTH INSTITUTE	80	80	\$29,777	\$15,936	\$45,713
729 PIEDMONT GERIATRIC HOSPITAL	\$3,292	\$12,809	\$347,813	\$89,444	\$453,358
730 BRUNSWICK CORRECTIONAL CENTER	80	80	80	80	80
731 STAUNTON CORRECTIONAL CENTER	\$55,323	\$78,516	\$337,984	\$26,250	\$498,073
735 HALPWAY HOUSE	80	80	80	80	80
737 ST. BRIDES CORRECTIONAL CENTER	\$475	80	\$2,090	80	\$2,565
738 SOUTHWEST VIRGINIA TRAINING CENTER	80	80	\$7,219	\$6,493	\$13,712
741 APPALACHIAN LEARNING CENTER	80	80	\$115,931	80	\$115,931
743 DAKESIDE LEARNING CENTER	80	80	80	80	80
744 HECKLEBURG CORRECTIONAL CENTER	80	80	\$100,835	80	\$100,835
745 HOTTOWAY CORRECTIONAL CENTER	80	80	80	80	80
747 HARRISON CORRECTIONAL CENTER	80	80	\$97,334	\$11,987	\$109,341
749 BLACKSBURG CORRECTIONAL CENTER	80	80	80	80	80
754 ALABAMA CORRECTIONAL CENTER	80	80	80	80	80
757 WESTERN REGIONAL FIELD UNITS	\$21,200	\$149,625	\$266,662	80	\$437,487
759 NORTHERN REGIONAL FIELD UNITS	\$27,783	\$21,543	\$138,250	80	\$187,576
760 EAST CENTRAL REGIONAL FIELD UNITS	80	\$15,470	\$157,442	80	\$172,912
761 SOUTHEAST REGIONAL FIELD UNITS	\$64	\$20,314	\$2,480	80	\$21,858
841 DEPARTMENT OF AVIATION	80	80	80	80	80
999 ALCOHOLIC BEVERAGE CONTROL BOARD	80	\$127,950	\$207,182	\$480	\$335,612
TOTAL FOR ALL STATE AGENCIES	\$15,559,468	\$19,140,813	\$61,482,592	\$9,811,970	\$105,994,843



COMMONWEALTH of VIRGINIA

DEPARTMENT OF EDUCATION

P.O. BOX 60

RICHMOND 23216-2060

December 27, 1988

Mr. Wendell L. Seldon, Director
Department of General Services
209 Ninth Street Office Building
Richmond, VA 23219

Re: Report of Estimated Costs to
Remove Asbestos in Public Schools

Dear Mr. Seldon:

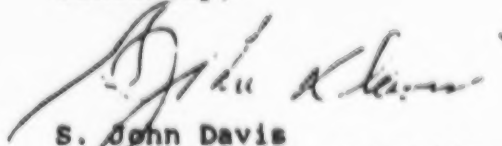
In response to the requirements in § 2.1-526.17 of the Code of Virginia, I am enclosing for your use a consolidated report of the estimated costs to abate the risks of asbestos in all public school buildings in Virginia. The report is compiled from inspections conducted under the Federal Asbestos Hazard Emergency Response Act (AHERA) and submitted to the Department of Education for review. The original act called for schools to submit their management plan reports by October 12, 1988. The act was amended in July of 1988 to allow schools to request a deferral of the October 12, 1988 submittal date to May 9, 1989. Approximately 34% of the public schools were granted deferrals under this law.

The enclosed report includes the estimated cost for the removal of all friable and non-friable asbestos containing building material and the replacement of that material where required, in a 1989 time frame. The figure does not include the costs for design/consulting fees or for air monitoring for final air clearance laboratory fees that are associated with each abatement project. It should be pointed out that a large percentage of the removal costs is associated with the removal of non-friable materials, such as floor tile, and most schools will postpone the removal of that material indefinitely as long as the material is maintained. The estimated costs are derived from the information contained in management plans submitted for 1024 schools that comprise 3283 buildings plus the projected estimate for those buildings whose reports will be submitted by May 9, 1989. We anticipate entering into our computer all information concerning costs to remove asbestos in each area of each building by mid-1989, and a more detailed printout will be available at that time.

Mr. Wendell L. Seldon
December 27, 1988

If you have any questions concerning this report. Please contact Mr. David L. Boddy, Associate Director, Energy and Facilities Services at 225-2035.

Sincerely,



S. John Davis
Superintendent of Public Instruction

SJD/st

Enclosure(s)

cc: The Honorable Donald J. Finley
Mr. M. E. Cale
Mr. David L. Boddy
Mr. Charles W. Callan

27-Dec-88 EST. COST OF ASBESTOS REMOVAL IN VA. PUBLIC SCHOOLS

COUNTY/CITY	NUMBER OF SCHOOLS	NUMBER OF BUILDINGS	TOTAL COST
ALBERMALE	20	51	\$2,313,500
ALLEGHANY HIGHLANDS	11	38	\$1,229,600
AMELIA	3	15	\$715,200
AMHERST	11	17	\$1,373,720
APPOMATTOX	4	13	\$413,500
ARLINGTON	33	46	\$18,761,147
AUGUSTA	21	97	\$3,839,000
BEDFORD	15	55	\$2,216,800
BLAND	5	15	\$544,713
BOTETOURT	10	18	\$1,341,800
BUCHANAN	19	108	\$2,916,490
BUCKINGHAM	7	23	\$489,840
CARROLL	16	34	\$948,884
CHARLES CITY	4	27	\$712,950
CHARLOTTE	6	22	\$913,750
CHESTERFIELD	53	177	\$39,165,530
CLARKE	5	7	\$36,490
CRAIG	3	8	\$266,950
CULPEPER	7	11	\$2,017,550
CUMBERLAND	1	19	\$161,000
DINWIDDIE	10	36	\$1,585,600
FAUQUIER	14	39	\$3,663,124
FLOYD	5	15	\$1,212,650
FLUVANNA	7	10	\$1,136,125
FRANKLIN	14	38	\$3,448,803
FREDERICK	12	16	\$262,440
GOOCHLAND	5	7	\$91,510
GRAYSON	13	25	\$1,735,575
GREENE	4	11	\$449,500
GREENSVILLE	6	49	\$946,046
HALIFAX	16	60	\$3,068,400
HANOVER	13	18	\$1,131,285
HENRICO	50	203	\$7,301,020
HENRY	21	72	\$3,533,600
HIGHLAND	2	8	\$676,000
ISLE OF WIGHT	6	49	\$666,700
KING GEORGE	4	19	\$826,060
LANCASTER	3	24	\$435,800
LOUISA	5	10	\$952,175
LUNENBURG	6	33	\$1,275,000
MADISON	5	17	\$944,000
MECKLENBURG	11	26	\$1,494,000
MIDDLESEX	4	22	\$161,040
MONTGOMERY	16	24	\$3,366,675
NELSON	8	31	\$953,000
NORTHAMPTON	8	30	\$1,593,555
NORTHUMBERLAND	4	22	\$260,434

27-Dec-88 EST. COST OF ASBESTOS REMOVAL IN VA. PUBLIC SCHOOLS

COUNTY/CITY	NUMBER OF SCHOOLS	NUMBER OF BUILDINGS	TOTAL COST
NOTTOWAY	7	30	\$464,440
ORANGE	6	16	\$741,124
PATRICK	7	20	\$1,045,560
PITTSYLVANIA	24	113	\$3,914,885
POWHATAN	4	9	\$217,000
PRINCE EDWARD	5	14	\$774,500
PRINCE GEORGE	10	47	\$599,805
PRINCE WILLIAM	43	87	\$3,323,971
RAPPAHANNOCK	2	3	\$129,499
RICHMOND	3	16	\$424,538
ROCKBRIDGE	11	13	\$5,744,680
RUSSELL	17	52	\$1,939,316
SCOTT	15	19	\$1,902,360
SOUTHAMPTON	7	37	\$100,800
SPOTSYLVANIA	14	70	\$931,792
STAFFORD	14	38	\$1,367,122
TAZEWELL	23	63	\$3,729,040
WASHINGTON	19	68	\$3,077,830
WISE	18	72	\$1,608,112
YORK	15	40	\$1,994,865
SUB TOTAL	790	2542	\$157,579,770

27-Dec-88 EST. COST OF ASBESTOS REMOVAL IN VA. PUBLIC SCHOOLS

COUNTY/CITY	NUMBER OF SCHOOLS	NUMBER OF BUILDINGS	TOTAL COST
BRISTOL	7	13	\$1,178,844
COLONIAL HEIGHTS	6	18	\$226,630
COVINGTON	4	5	\$513,500
DANVILLE	16	48	\$3,535,380
FALLS CHURCH	3	6	\$343,217
FREDERICKSBURG	4	9	\$952,200
GALAX	3	8	\$376,420
HAMPTON	34	42	\$9,031,000
HARRISONBURG	5	17	\$1,940,000
HOPEWELL	7	22	\$2,517,160
NORTON	2	3	\$20,000
PORTSMOUTH	30	109	\$7,769,000
RADFORD	4	17	\$525,522
STAUNTON	8	10	\$1,322,170
VIRGINIA BEACH	68	327	\$12,708,623
WILLIAMSBURG	7	37	\$1,284,900
WINCHESTER	6	8	\$83,760
SOUTH BOSTON	2	6	\$454,500
FRANKLIN	3	8	\$214,000
LEXINGTON	2	4	\$312,250
SALEM	6	7	\$123,825
POQUOSAN	3	12	\$426,500
MANASSAS PARK	4	5	\$967,506
SUB TOTAL:	234	741	\$46,826,907
GRAND TOTAL:	1024	3283	\$204,406,677

89 Divisions reporting - Total Cost to Remove	\$204,406,677
46 Divisions with Deferrals -	
Estimated cost to remove	\$134,198,299

135 Divisions	\$338,604,976
